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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,371	10/14/2004	Bruno Johan Georges Putzeys	BE 020008	8691

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
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EXAMINER

NGUYEN, HIEU P

ART UNIT PAPER NUMBER

2817

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/511,371

Applicant(s)

PUTZEYS, BRUNO JOHAN  
GEORGES

Examiner

Hieu P. Nguyen

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

Applicant is required to update the status (pending, allowed, etc.) of all parent priority applications in the first line of the specification. The status of all citations of US filed applications in the specification should also be updated where appropriate.

The specification has not been checked to the extent necessary to determine the presence to all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-5 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Pullen et al. (U.S. 6118336).

Regarding claims 1-2 and 4-5, Fig. 1(a) of Pullen discloses a power amplifier for amplifying an electric signal in an operational frequency range comprising switching means (42/44, as mentioned in col. 2, lines 57) for generating a block wave signal by alternately switching the block wave signal to a first supply voltage (B+) or a second supply voltage (B-),

filter means (LF/CF, as mentioned in col. 2, lines 36) for generating a power output signal by low pass filtering the block wave signal, input means (14, as mentioned in col. 2, lines 29-33) for receiving the electric signal and driving the switching means, and a control circuit (RFBA or RFBD, as mentioned in col. 2, lines 33-36) coupled to the output power signal and the input means for controlling the power amplifier, characterized in that the control circuit is connected between the power output signal and a linear input of the input means for controlling both the gain in the operational frequency range and also said alternately switching of the switching means, said linear input being substantially free of hysteresis, **meeting claim 1**. Pullen further discloses in Fig. 1(a) the control circuit is/are the feedback resistor(s), thus **meeting claim 2/1**. Pullen further discloses in Fig. 1(a) that the filter means comprises a self-inductance (LF) and a capacitance (CF), **meeting claim 4/1**. Pullen further discloses in Fig. 1(a) the switching means comprise a first switching unit (42) for switching to the first supply voltage (B+) and an **identical** second switching unit (44) for switching to the second supply voltage (B-), and the input means comprise a voltage comparator (14) having complementary current outputs for respectively driving the first and second switching unit, **meeting claims 5/1 and 7/1** as expected. Pullen further discloses in Fig. 1(a) the power amplifier, wherein one of the switching units is floating with respect to said supply voltages, and derives its power from a bootstrap diode (D1) power circuit as mentioned in col. 2, lines 56-63, **meeting claim 8/1**. Pullen further discloses in Fig. 1(a) the power amplifier, wherein the switching means comprise a driver circuit (19/20) for a MOSFET type power switch, the circuit including active pull-up circuit for discharging a gate of said power switch, thus **meeting claim 9/1**. In addition, Pullen discloses the power amplifier circuit in Fig. 1(a) for use in a power amplifier for amplifying an electric signal in an operational

Art Unit: 2817

frequency range, the circuit comprising switching means (42/44) for generating a block wave signal by alternately switching the signal to a first supply voltage (B+) or a second supply voltage (B-), input means (14) for receiving the electric signal and driving the switching means, characterized in that the input means (14) have a linear input for connecting a controlling circuit (e.g., RFBA and/or RFBD) for controlling both the gain in the operational frequency range and also said alternately switching of the switching means, said controlling circuit being connected between the linear input and a power output signal generated by low pass filtering the block wave signal, said linear input being substantially free of hysteresis (note: the comparators are designed with small hysteresis as mentioned in col. 3, lines 31-33), thus **meeting claim 10/1** as well.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pullen in view of MacMillan (U.S. 6441685).

Regarding claim 3, Pullen discloses everything claimed as applied to claim 2 except for the power amplifier, “wherein the control circuit comprises a first element, in particular a resistor, for controlling said gain and a second element, in particular a capacitance in series with

a resistor, for controlling said alternately switching". However, MacMillan discloses an analogous circuit in Fig. 4 comprising: switching means (423/424), filter means (425/427), input means (301) and a control circuit (313) comprising a first element, in particular a resistor (416), for controlling said gain and a second element, in particular a capacitance (415) in series with a resistor, for controlling said alternately switching.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of MacMillan into the circuit of Pullen by having a capacitor in series with the resistor. The ordinary artisan would have been motivated to modify the circuit of Pullen in the manner set forth for at least the purpose of filtering and attenuating low frequency components as mentioned in col. 6, lines 27-29, **meeting claim 3/2**.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pullen in view of Afphahi (U.S. 5955899).

Regarding claim 6, Pullen discloses everything claimed as applied to claim 5. Pullen fails to disclose the voltage comparator in detail. However, Afphahi suggested a compact voltage comparator in Fig. 1 comprising a difference amplifier and a switching current mirror (A/B) providing said complementary current outputs (OUT+ and OUT-)".

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Afphahi into the circuit of Pullen by implementing a compact comparator. The ordinary artisan would have been motivated to modify the circuit of Pullen in the manner set forth for at least the purpose of minimizing space, **meeting claim 6/5**.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu Nguyen whose telephone number is 571-272-8577. The examiner can normally be reached on M-F 8-5.

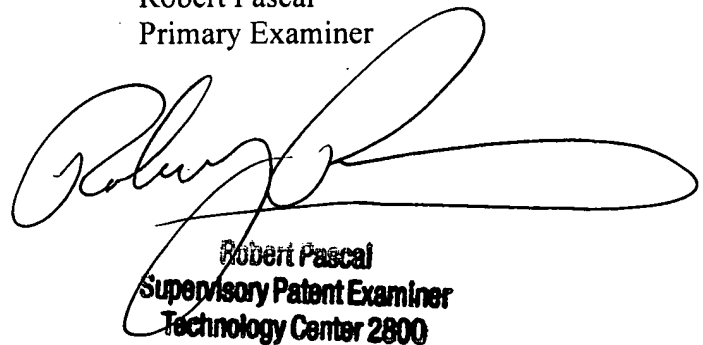
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hieu Nguyen  
AU: 2817

hn

Robert Pascal  
Primary Examiner



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